



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0342; Directorate Identifier 2013-NE-14-AD]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce Deutschland Ltd & Co. KG Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for Rolls-Royce Deutschland Ltd & Co. KG (RRD) Tay 620-15, 650-15, and 651-54 turbofan engines.

This proposed AD was prompted by the discovery that the low-pressure compressor (LPC) fan blades leading edges erode in service and create an unacceptable blade flutter margin. This proposed AD would require replacement of LPC fan blades. We are proposing this AD to prevent LPC fan blade failure, damage to the engine, and damage to the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.

- Mail: Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

- Fax: 202-493-2251.

For service information identified in this proposed AD, contact Rolls-Royce Deutschland Ltd & Co KG, Eschenweg 11, Dahlewitz, 15827 Blankenfelde-Mahlow, Germany; phone: 49 0 33-7086-1200 (direct 1016); fax: 49 0 33-7086-1212. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the mandatory continuing airworthiness information (MCAI), the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (phone: 800-647-5527) is the same as the Mail address provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Frederick Zink, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England

Executive Park, Burlington, MA 01803; phone: 781-238-7779; fax: 781-238 7199; email: frederick.zink@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2013-0342; Directorate Identifier 2013-NE-14-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this proposed AD. Using the search function of the Web site, anyone can find and read the comments in any of our dockets, including, if provided, the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2013-0143, dated

July 12, 2013 (referred to hereinafter as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

Service history of Tay series engines discovered that low pressure compressor (LPC) fan blade leading edge could be subject of excessive deterioration. The LPC fan blade leading edge profile influences the LPC aerodynamic characteristics and stability. This condition, if not corrected, could reduce fan flutter margin and, in some cases, could lead to fan blade failure, possibly resulting in uncontained release of high energy debris with consequent damage to, and/or reduced control of, the aeroplane.

You may obtain further information by examining the MCAI in the AD docket. Service-history-relevant failure cases and a standard leading edge erosion rate profile analysis support the requirement for replacement of fan blades at the cycle intervals listed in the proposed AD, to maintain an acceptable fan flutter margin. We are proposing this AD to prevent LPC fan blade failure, damage to the engine, and damage to the airplane.

FAA’s Determination and Requirements of This Proposed AD

This product has been approved by the aviation authority of Germany, and is approved for operation in the United States. Pursuant to our bilateral agreement with the European Community, EASA has notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design. This proposed AD would require replacement of LPC fan blades at specific intervals.

Costs of Compliance

We estimate that this proposed AD affects 52 engines installed on airplanes of U.S. registry. We also estimate that it would take about six hours per engine to replace

the LPC fan blades. The average labor rate is \$85 per hour. Required parts cost about \$11,000 per engine. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$598,520.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979), and

(3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directives (ADs):

Rolls-Royce Deutschland Ltd & Co KG (Formerly Rolls-Royce Deutschland GmbH, formerly Rolls-Royce plc): Docket No. FAA-2013-0342; Directorate Identifier 2013-NE-14-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Rolls-Royce Deutschland Ltd & Co. KG (RRD) Tay 620-15, 650-15, and 651-54 turbofan engines.

(d) Reason

This AD was prompted by the discovery that the low-pressure compressor (LPC) fan blades leading edges erode in service and create an unacceptable blade flutter margin. We are issuing this AD to prevent LPC fan blade failure, damage to the engine, and damage to the airplane.

(e) Actions and Compliance

Unless already done, do the following actions:

(1) For Tay 620-15 engines, replace the complete set of LPC fan blades with a set eligible for installation as follows:

(i) If on the effective date of this AD, the LPC fan blades:

(A) Have less than 10,000 flight cycles since new (FCSN) or flight cycles since last repair (FCSLR), replace the blades before accumulating 12,000 FCSN or FCSLR.

(B) Have 10,000 or more FCSN or FCSLR, replace the blades within 2,000 flight cycles (FC).

(ii) Thereafter, replace the LPC fan blades within 12,000 FCSN or FCSLR.

(2) For Tay 650-15 and Tay 651-54 engines, replace the complete set of LPC fan blades with a set eligible for installation as follows:

(i) If on the effective date of this AD, the LPC fan blades

(A) Have less than 8,000 FCSN or FCSLR, replace the blades before accumulating 10,000 FCSN or FCSLR.

(B) Have 8,000 or more FCSN or FCSLR, replace the fan blades within 2,000 FC.

(ii) Thereafter, replace the LPC fan blades within 10,000 FCSN or FCSLR.

(f) Definitions

(1) For the purpose of this AD, a repair is one that was performed in accordance with RRD Alert Non-Modification Service Bulletin (NMSB) No. Tay-72-A1782, Revision 2, dated May 30, 2013, or earlier versions of this Alert NMSB.

(2) LPC fan blades eligible for installation are:

(i) For Tay 620-15 engines, LPC fan blades with less than 12,000 FCSN or FCSLR; and

(ii) For Tay 650-15 and Tay 651-54 engines, LPC fan blades with less than 10,000 FCSN or FCSLR.

(g) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs to this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(h) Related Information

(1) For more information about this AD, contact Frederick Zink, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New

England Executive Park, Burlington, MA 01803; phone: 781-238-7779; fax: 781-238-7199; email: frederick.zink@faa.gov.

(2) Refer to European Aviation Safety Agency AD 2013-0143, dated July 12, 2013, for more information. You may examine the AD on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2013-0342.

(3) RRD Alert NMSB No. Tay-72-A1782, Revision 2, dated May 30, 2013, pertains to the subject of this AD and can be obtained from RRD, using the contact information in paragraph (h)(4) of this AD.

(4) For service information identified in this AD, contact Rolls-Royce Deutschland Ltd & Co KG, Eschenweg 11, Dahlewitz, 15827 Blankenfelde-Mahlow, Germany; phone: 49 0 33-7086-1200 (direct 1016); fax: 49 0 33-7086-1212.

(5) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on September 16, 2013.

Carlos A. Pestana,
Acting Directorate Assistant Manager, Engine & Propeller Directorate,
Aircraft Certification Service.

[FR Doc. 2013-23454 Filed 09/25/2013 at 8:45 am; Publication Date: 09/26/2013]